



# NORLITE, LLC

---

628 SO. SARATOGA STREET  
PO BOX 684  
COHOES, NY 12047  
PHONE: (518) 235-0401  
FAX: (518) 235-0233

December 29, 2014

Ms. Nancy Baker  
Deputy Regional Permit Administrator  
New York State Department of Environmental Conservation  
Region 4  
1130 North Westcott Road  
Schenectady, NY 12306-2014

RETURN RECEIPT REQUESTED VIA EMAIL

Mr. Robert Buettner  
Air Compliance Branch  
United States Environmental Protection Agency  
Region 2  
290 Broadway  
New York, NY 10007-1866

RETURN RECEIPT REQUESTED VIA EMAIL

Re: Norlite Corporation-MACT Excessive Exceedances Report  
Kiln 1: 11/14/14 – 12/23/14  
Kiln 2: 11/14/14 – 12/23/14

Dear Sir/Madam:

In accordance with 40 CFR 63.1206(c)(3)(vi), the Norlite, LLC (Norlite) is submitting an "Excessive Exceedance Report" for the timeframe of 11/14/14 thru 12/23/14. The attached document explains each of the "malfunctions" for Kilns One and Two.

The results of the investigation concluded a majority of the waste feed cutoffs were a result of the limits associated with the stack gas flow monitor. The Kiln 2 unit has had several issues which have affected the stack gas probe. The kiln was shutdown several times in November and December for scrubber and baghouse maintenance. Starting December 6<sup>th</sup>, Kiln 2 was shutdown for a week for maintenance and multiclone replacement. Since the multiclone replacement, the overall operation of the kiln has improved but was impacted by bad weather. The new multiclone unit should help preserve the baghouse bags which should in turn help reduce issues related with the scrubber.

Norlite, with the assistance of ARCADIS has been working to resolve stack gas span cutoffs in general for over two years. Since the NYSDEC gave concurrence to proceed on April 18, 2013, Norlite has been working to implement this new optical flow technology to monitor stack gas flow rate. A test unit was installed on Kiln 1 and RATA tested on November 26, 2013. The final RATA Testing report was submitted along with a proposal for implementing official use of the unit to the DEC on December 24, 2013. Norlite prepared and submitted a permit modification request to the Department on March 25, 2014 and received approval for the permit modification on April 16, 2014. On April 18, 2014 at 1:00 PM, Norlite placed the Optical Flow Sensor for Kiln 1 into certified operation. Since April 18, the Kiln 1 Optical Flow Sensor has mostly operated as expected with only a relatively few issues seen. The issues that have been seen have been related to baghouse operational issues which caused signal deterioration with the detectors. Norlite has also seen the colder temperatures affect the purge air which is used to keep the lenses clean. The purge air issue is being corrected with the installation of an instrument grade air compressor which will supply clean dry air for the purge air system. The previous stack gas flow rate measuring technology has remained in place for data collection but is no longer part of the AWFCO system. Since receiving approval for the Kiln 1 permit modification, Norlite has purchased and installed an optical flow sensor on Kiln 2. On May 27, Norlite conducted preliminary testing and data collection on the Kiln 2 unit to further help setup and troubleshooting. Norlite is conducting additional troubleshooting of the Kiln 2 unit by moving its location in the ductwork to verify if the operation improves. The step after that will be to install a new unit to see if that unit experiences the same operational issues. Norlite still feels it is very possible to have an optical flow sensor in

DCL: 2421



## NORLITE, LLC

---

certified operation on Kiln 2 by the beginning of 2015. Once passing RATA results are obtained, Norlite will prepare a permit modification similar to the Kiln 1 permit modification for submittal and approval for Kiln 2.

Norlite has been working with the DEC to improve LGF delivery and handling at the kilns to address these types of cutoffs. In April 2013, the DEC conditionally approved Norlite's plan to remove the minimum LGF Line Pressure requirement, allow a positive displacement pump to be used for fuel flow control, and allow the use of a recirculation line for use during times when off LGF. The DEC also requested a six month study be conducted without a minimum LGF Line Pressure requirement. The study was started on May 1, 2013 and completed on October 31, 2013. Norlite conducted an extensive search for a positive displacement pump which would allow variable speed control, have tight pump tolerance, and have suitable reliability for long term use. The results of the six month study which summarized over 4 million lines of operational data between the two kilns was submitted to the DEC on December 5, 2013. Based from the results of the six month study, Norlite feels the data supports the removal of the minimum LGF Line Pressure requirement. Norlite has concluded that a positive displacement pump which meets all the needed criteria does not exist. As stated previously, Norlite has acquired the assistance of a process engineering firm to assist in the search for a suitable positive displacement pump and conduct an overall review of the entire kiln feed system to provide a proposal for improving the kiln fuel feed system. The process engineering firm has been supplied with facility drawings, had several discussions with Norlite personnel, and taken a facility tour to better understand the facility operations as they relate to fuel delivery at the kilns. Norlite submitted a proposal provided by SPEC Engineering to the DEC on December 31, 2013 for review and approval. The proposal was to use an automated control loop to control pressures and fuel flow rates at the kilns. On January 13, 2014, the DEC approved the overall concept of the proposal with the requirement that additional engineering specifications be provided by certain dates for ultimate approval of the entire project.

Norlite and SPEC Engineering have completed an extensive hydraulic study of the entire LGF Fuel delivery system to ensure that proper velocities can be maintained throughout the piping system to prevent material buildup and keep the LGF homogeneously mixed. Norlite and SPEC Engineering have also met with the DEC or spoke with the DEC on the phone several times to go over the hydraulic study as well as keep the Department up to date on the overall progress of the project. Norlite and SPEC Engineering have finalized the engineering design of the overall kiln fuel delivery system, including 3D drawings of the piping to help visualize the overall project. Norlite and SPEC have confirmed their commitment to ensuring the kiln fuel delivery system operates as expected with as few troubleshooting issues as possible. For this to occur, additional engineering was needed during the design phase. Norlite met with the DEC in early April to go over the fuel piping layout and other related engineering design aspects. SPEC has finalized the bid packages which Norlite and Tradebe Engineering have approved and released for bid. Norlite is in the process of reviewing the returned bid packages and will be selecting a contractor shortly. Once a contractor has been selected, Norlite has a timeframe which sees the project completed for both kilns by the end of February 2015. An engineering package has been supplied to the DEC for review and approval. While the DEC reviews the engineering design, Norlite will continue with procurement and installation.

All of the malfunctions that occurred were consistent with our Startup, Shutdown and Malfunction Plan (SSMP). As approved by the NYSDEC on February 6, 2006, these reports are being sent electronically.



# NORLITE, LLC

---

Should you have any questions regarding this letter, please contact me at (518) 235-0401 or email at: [tom.vanvranken@tradebe.com](mailto:tom.vanvranken@tradebe.com).

Sincerely,

*Thomas Van Vranken*

Thomas Van Vranken  
Environmental Manager

## Attachments

ecc: Don Spencer, NYDEC – R4 w/attachments  
Thomas Killeen, NYSDEC – CO w/attachments  
Joseph Hadersbeck, NYSDEC – R4w/attachments  
Jim Quinn, NYSDEC – R4 w/attachments  
Tita LaGrimas – Tradebe



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 1  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/26/2014	8:18:44	11/26/2014	9:45:30	1:26:46	264	Malfunction	I&E Started Conducting Lime Calibrations Before the Operator Was Off Fuel Which Caused the Lower Limit for Lime Feed to be Reached	Lime Feed Rate	Opl	I&E Completed Lime Calibration and the Operator Reestablished Proper Feed
11/28/2014	17:00:10	11/28/2014	18:14:25	1:14:15	265	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength.
11/29/2014	0:20:09	11/29/2014	1:27:43	1:07:34	266	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength.
11/29/2014	6:00:08	11/29/2014	7:50:50	1:50:42	267	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength.
11/30/2014	10:24:05	11/30/2014	11:15:45	0:51:40	268	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength.
12/2/2014	1:34:52	12/2/2014	1:35:50	0:00:58	269	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Soda Ash System Continuously Sending Soda Ash to the Scrubber Because of High Sulfur Content Fuel	Scrubber pH	Span	The Feed Rate for the Fuel Was Reduced to Allow the Scrubber System pH to Equilibrate
12/2/2014	2:36:51	12/2/2014	2:45:09	0:08:18	270	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Soda Ash System Continuously Sending Soda Ash to the Scrubber Because of High Sulfur Content Fuel	Scrubber pH	Span	The Feed Rate for the Fuel Was Reduced to Allow the Scrubber System pH to Equilibrate
12/2/2014	8:11:50	12/2/2014	8:12:13	0:00:23	271	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Soda Ash System Continuously Sending Soda Ash to the Scrubber Because of High Sulfur Content Fuel	Scrubber pH	Span	The Feed Rate for the Fuel Was Reduced to Allow the Scrubber System pH to Equilibrate
12/2/2014	21:42:28	12/2/2014	21:51:14	0:08:46	272	Malfunction	After a Tank Switch, the Feed Pump Started Surging Which Caused Flow Rate Surges, Triggering the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	The Kiln Operator Adjusted the Pump Pressures to Stabilize the Pump and Line Pressures
12/2/2014	22:05:49	12/2/2014	22:06:10	0:00:21	273	Malfunction	After a Tank Switch, the Feed Pump Started Surging Which Caused Flow Rate Surges, Triggering the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	The Kiln Operator Adjusted the Pump Pressures to Stabilize the Pump and Line Pressures
12/6/2014	21:11:26	12/6/2014	21:13:06	0:01:40	274	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Triggering the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers are Reviewing the Feed System to Provide Operational Improvements



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 1  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
12/6/2014	21:13:10	12/6/2014	21:13:48	0:00:38	275	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Triggering the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers are Reviewing the Feed System to Provide Operational Improvements
12/8/2014	21:46:51	12/8/2014	21:48:04	0:01:13	276	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the pH Probe Being Coated With Soda Ash	Scrubber pH	Span	I&E Cleaned the Probe and Ensured Proper Operation
12/15/2014	10:54:56	12/15/2014	10:55:35	0:00:39	277	Malfunction	Instantaneous Upper Instrument Setpoint Reached Due to the Optical Flow Sensor Being Dirty	Stack Gas Flow Rate	Span	I&E Cleaned the Optical Flow Lenses and Ensured Proper Operation
12/15/2014	19:01:50	12/15/2014	19:04:27	0:02:37	278	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to the Flow Rate Meter Being Coated With Soda Ash Solids	Scrubber Recirc. Rate	Span	I&E Was Called In to Clean the Flow Meter And Check the Calibration of the Unit
12/15/2014	19:26:37	12/15/2014	19:27:19	0:00:42	279	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to the Flow Rate Meter Being Coated With Soda Ash Solids	Scrubber Recirc. Rate	Span	I&E Was Called In to Clean the Flow Meter And Check the Calibration of the Unit
12/15/2014	19:35:09	12/15/2014	19:38:03	0:02:54	280	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to the Flow Rate Meter Being Coated With Soda Ash Solids	Scrubber Recirc. Rate	Span	I&E Was Called In to Clean the Flow Meter And Check the Calibration of the Unit
12/17/2014	11:11:41	12/17/2014	11:40:49	0:29:08	281	Malfunction	Instantaneous Upper Instrument Setpoint Reached Due to the Optical Flow Sensor Being Dirty	Stack Gas Flow Rate	Span	I&E Cleaned the Optical Flow Lenses and Ensured Proper Operation
12/19/2014	21:19:48	12/19/2014	21:20:24	0:00:36	282	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due the pH System Filling the Recycle Tank Causing A High System pH	Scrubber pH	Span	The pH System Was Checked By I&E and the Recycle Tank Level Reduced to Return A Proper System pH
12/20/2014	9:08:14	12/20/2014	9:08:41	0:00:27	283	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the pH Probe Being Coated With Soda Ash	Scrubber pH	Span	I&E Cleaned the Probe and Ensured Proper Operation
12/22/2014	12:16:27	12/22/2014	12:17:18	0:00:51	284	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the pH Probe Being Coated With Soda Ash	Scrubber pH	Span	I&E Cleaned the Probe and Ensured Proper Operation



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/14/2014	1:50:55	11/14/2014	1:51:20	0:00:25	466	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/14/2014	5:15:28	11/14/2014	5:16:08	0:00:40	467	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/14/2014	16:02:41	11/14/2014	16:10:02	0:07:21	468	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/14/2014	17:15:39	11/14/2014	18:03:44	0:48:05	469	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/15/2014	5:18:44	11/15/2014	5:19:04	0:00:20	470	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/15/2014	5:19:09	11/15/2014	5:19:45	0:00:36	471	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/15/2014	6:36:56	11/15/2014	6:38:08	0:01:12	472	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/15/2014	6:58:47	11/15/2014	8:38:19	1:39:32	473	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/16/2014	3:25:39	11/16/2014	3:26:05	0:00:26	474	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/16/2014	3:26:11	11/16/2014	3:27:10	0:00:59	475	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/16/2014	3:35:08	11/16/2014	3:36:10	0:01:02	476	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/17/2014	2:53:37	11/17/2014	3:00:59	0:07:22	477	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	5:50:47	11/17/2014	5:51:19	0:00:32	478	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	5:53:52	11/17/2014	5:54:34	0:00:42	479	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	6:00:33	11/17/2014	6:01:01	0:00:28	480	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	6:02:35	11/17/2014	6:03:02	0:00:27	481	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	6:11:55	11/17/2014	6:12:38	0:00:43	482	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/17/2014	6:20:40	11/17/2014	7:35:46	1:15:06	483	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Power Outage In Order to Make Repair on Kiln 1 Which Stopped Feed; Switched to Virgin Fuel	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	4:10:31	11/18/2014	4:13:20	0:02:49	484	Malfunction	Plugged Scrubber Recirc. Tank Baskets Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber Recirc. Span	Scrubber Recirc. Rate	Span	The WWTP Mechanic Cleaned the Recirc. Tank Baskets
11/18/2014	6:45:45	11/18/2014	7:26:49	0:41:04	485	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	7:34:54	11/18/2014	9:18:14	1:43:20	486	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Low Blowdown Flow	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	11:56:45	11/18/2014	12:34:27	0:37:42	487	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	12:40:09	11/18/2014	13:42:31	1:02:22	488	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe





NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/18/2014	13:50:53	11/18/2014	15:55:20	2:04:27	489	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	17:17:33	11/18/2014	17:42:48	0:25:15	490	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	23:27:44	11/18/2014	23:41:27	0:13:43	491	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/18/2014	23:52:54	11/18/2014	23:59:07	0:06:13	492	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	0:43:53	11/19/2014	0:58:57	0:15:04	493	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	2:42:29	11/19/2014	2:52:30	0:10:01	494	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	3:26:36	11/19/2014	3:53:18	0:26:42	495	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	4:30:58	11/19/2014	4:44:31	0:13:33	496	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	6:49:10	11/19/2014	7:08:55	0:19:45	497	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	7:45:05	11/19/2014	7:53:23	0:08:18	498	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	10:29:45	11/19/2014	10:55:37	0:25:52	499	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/19/2014	11:35:10	11/19/2014	12:24:25	0:49:15	500	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe





NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/19/2014	16:19:25	11/19/2014	18:30:42	2:11:17	501	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Rinsed the Mist Pad	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/20/2014	4:19:51	11/20/2014	8:26:34	4:06:43	502	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/20/2014	16:31:29	11/20/2014	16:34:47	0:03:18	503	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/20/2014	17:04:06	11/20/2014	20:12:11	3:08:05	504	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Rinsed the Mist Pad	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/21/2014	8:45:46	11/21/2014	10:42:37	1:56:51	505	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Rinsed the Mist Pad	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/21/2014	17:56:52	11/21/2014	17:57:39	0:00:47	506	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay		Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/22/2014	7:39:31	11/22/2014	7:40:30	0:00:59	507	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/27/2014	5:06:21	11/27/2014	5:06:51	0:00:30	508	Malfunction	The Operators Were Controlling Flow Rate Using Valves Which Caused a Fuel Surge to Occur and the Instantaneous Upper Instrument Setpoint Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
11/28/2014	10:35:15	11/28/2014	12:44:56	2:09:41	509	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/29/2014	5:18:13	11/29/2014	5:18:51	0:00:38	510	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/29/2014	5:37:47	11/29/2014	8:55:24	3:17:37	511	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe / Low Venturi / Rinsed the Mist Pad	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
11/30/2014	4:36:00	11/30/2014	4:38:02	0:02:02	512	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
11/30/2014	6:41:28	11/30/2014	6:42:03	0:00:35	513	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/2/2014	1:47:43	12/2/2014	1:48:30	0:00:47	514	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/2/2014	3:02:38	12/2/2014	3:27:13	0:24:35	515	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/2/2014	6:20:12	12/2/2014	6:25:56	0:05:44	516	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/2/2014	7:30:03	12/2/2014	9:42:53	2:12:50	517	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/5/2014	4:08:22	12/5/2014	4:09:21	0:00:59	518	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
12/5/2014	7:23:41	12/5/2014	7:24:10	0:00:29	519	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Retention in the Scrubber From Washing Out The Mist Pad	Stack Gas Flow Rate	Span	The Kiln Was Shutdown on 12/6/14 for A Week Long Maintenance Cycle and Multiclone Replacement
12/5/2014	8:30:20	12/5/2014	8:30:44	0:00:24	520	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Retention in the Scrubber From Washing Out The Mist Pad	Stack Gas Flow Rate	Span	The Kiln Was Shutdown on 12/6/14 for A Week Long Maintenance Cycle and Multiclone Replacement
12/5/2014	17:24:40	12/5/2014	19:42:04	2:17:24	521	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Retention in the Scrubber From Washing Out The Mist Pad	Stack Gas Flow Rate	Span	The Kiln Was Shutdown on 12/6/14 for A Week Long Maintenance Cycle and Multiclone Replacement



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
12/6/2014	0:38:46	12/6/2014	0:41:15	0:02:29	522	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
12/16/2014	7:22:24	12/16/2014	7:58:54	0:36:30	523	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/17/2014	22:01:50	12/17/2014	22:03:07	0:01:17	524	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	8:01:05	12/18/2014	8:02:21	0:01:16	525	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	8:16:36	12/18/2014	8:17:05	0:00:29	526	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	8:17:10	12/18/2014	8:18:16	0:01:06	527	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	8:20:42	12/18/2014	8:21:16	0:00:34	528	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	8:21:21	12/18/2014	8:22:07	0:00:46	529	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/18/2014	9:00:49	12/18/2014	9:20:54	0:20:05	530	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
11/14/14 - 12/23/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
12/18/2014	12:36:57	12/18/2014	12:40:35	0:03:38	531	Malfunction	The Upper Limit for Frontend Kiln Pressure Was Reached Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Sudden Pressure Changes At the Front of the Kiln	Front Kiln Pressure, 1 Second Delay	Opl	The ID Fan and Barron Fans Were Adjusted to Try To Control the Kiln Pressure During the Strong Wind Gusts
12/19/2014	8:31:58	12/19/2014	8:33:25	0:01:27	532	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/19/2014	23:39:45	12/19/2014	23:40:18	0:00:33	533	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/19/2014	23:55:54	12/19/2014	23:56:30	0:00:36	534	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/20/2014	0:02:50	12/20/2014	0:03:36	0:00:46	535	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Strong Wind Gusts Coming Out of the Northwest Which Caused Condensation in the Stack That Contacted the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/21/2014	2:59:12	12/21/2014	3:01:49	0:02:37	536	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe
12/22/2014	3:58:06	12/22/2014	7:17:19	3:19:13	537	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe